

ABSTRAK

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Program Studi : Pendidikan Dokter Gigi
Judul : Efek Antibakteri Infusum Daging *Aloe vera* terhadap *Porphyromonas gingivalis* In Vitro (Perbandingan Metode Ekstraksi Maserasi dan Infundasi)

Aloe vera memiliki sifat antibakteri karena kandungan senyawa fenolnya. *Porphyromonas gingivalis* merupakan agen penyebab dominan pada penyakit periodontal. Tujuan penelitian ini untuk menguji efek antibakteri infusum daging *Aloe vera* terhadap *Porphyromonas gingivalis* (*in vitro*). Dilakukan ekstraksi dengan metode maserasi dan infundasi untuk menarik senyawa aktif antibakteri dalam *Aloe vera*. Uji antibakteri dilakukan melalui metode dilusi (KHM dan KBM) dan difusi (zona hambat). Infusum daging *Aloe vera* terbukti mengandung senyawa fenol dan tanin. Hasil metode dilusi menunjukkan nilai KHM sebesar 80% dan nilai KBM tidak dapat ditentukan. Hasil metode difusi menunjukkan zona hambat tertinggi sebesar 1,75 mm pada konsentrasi 50% dan 90%. Kesimpulan, infusum daging lidah buaya hanya memiliki sifat bakteriostatik terhadap *Porphyromonas gingivalis* strain standar ATCC 33277, *in vitro*.

Kata kunci : daging *Aloe vera*, ekstraksi, *Porphyromonas gingivalis*, KHM, KBM

ABSTRACT

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Title : The Antibacterial Effect of *Aloe vera* Leaf Pulp Infuse on *Porphyromonas gingivalis* In Vitro (Comparison of Maceration and Infusion Extraction Method)

Aloe vera has been known to possess antibacterial properties because of its phenolic compound. *Porphyromonas gingivalis* is a dominant etiological agent of periodontal disease. The aim of this study was to examine the antibacterial effect of *Aloe vera* leaf pulp on *Porphyromonas gingivalis* (in vitro). Extraction of *Aloe vera* was performed using maceration and infusion method to attract antibacterial active compounds in *Aloe vera*. The antibacterial test was carried out by applying dilution technique (MIC and MBC values) and diffusion technique (inhibitory zones). *Aloe vera* leaf pulp infuse revealed the presence of phenol and tannin. The result of dilution method showed that MIC value was at 80% concentration and MBC value could not be determined. The largest inhibitory zone resulting from diffusion method was 1,75 mm at 50% and 90% concentrations. Conclusion, *Aloe vera* leaf pulp infuse has only bacteriostatic effect on *Porphyromonas gingivalis* standard strain ATCC 33277, invitro.

Key words : leaf pulp of *Aloe vera*, extraction, *Porphyromonas gingivalis*, MIC, MBC